

Flooding Effects

Rocky Mountain Arsenal National Wildlife Refuge Complex



Havana Pond Dam at Rocky Mountain Arsenal / USFWS

Background

On Thursday, September 12, 2013, Rocky Mountain Arsenal National Wildlife Refuge experienced a dam breach at Havana Ponds located just north of 56th Avenue and east of Havana Street. Due to heavy rainfall, the dam was impacted from Denver storm water upstream. The breach caused damage to roads, trails, and other infrastructure on the Refuge. Water was detained by an old railroad embankment, 1 ½ miles downstream from Havana Ponds, which held despite not being designed for this type of event. The potential for the embankment to fail created a threat to communities further downstream and residents were evacuated in the Irondale neighborhood to the northwest of the Refuge. Roads bordering the northwest portion of the Refuge were closed, to include a section of Highway 2 and 96th Avenue. The Refuge closed at 10:00 am to all public visitation until an assessment of damages can be made and it is deemed safe to resume visitation. Refuge staff was on-site monitoring the on-going situation around the clock. Constant communication occurred between Refuge staff, Commerce City and Adams County emergency operations centers.

On Friday, September 13, the evacuation notice was lifted for the

Irondale community and residents were allowed to return home. The U.S. Army pumped the water held at the railroad embankment, however, additional rainfall overnight caused water levels to rise again. Refuge staff remained on-site through the evening to monitor the water level. All Refuge personnel had been accounted for, and continued to follow emergency safety procedures with no report of injuries. At 11:30 am, a joint press conference was held with the Refuge and Commerce City followed by a media and congressional tour of the damaged areas. The Refuge had served as an asset to protect the community from the floodwaters.

The Refuge experienced additional rainfall throughout Saturday and Sunday, September 14 and 15. Road conditions and infrastructure continues to be monitored by Refuge staff. A team from the Regional Office, including the engineering division, assessed and documented damages and evaluated the condition of the dam.

As of Monday, September 16, the following areas had received notable damage:

- Havana Pond Dam breached
- Road between C Street and 6th

Avenue washed out

- 6 out of 11 trails have sections that are washed out or have heavy erosion
- 3 buildings, to include the Visitor Center, have water damage

On Tuesday, September 17, a preliminary damage assessment was estimated at \$23M and will be refined in the coming weeks.

Path Forward

The Refuge received initial federal emergency funds the week of September 16 and a contract was awarded on Wednesday, September 18. Work is now underway to make the most needed temporary repairs to roads, trails, and infrastructure to ensure the Refuge is safe to reopen for public visitation. Once these repairs have been completed, the Refuge will re-open. It is hoped that before winter, permanent repairs will be made. During this time, visitation will not be affected, however, visitors may encounter rotating trail and road closures. The Refuge staff continues to work hard toward bringing the Refuge back to normal operations so visitors can once again enjoy nature to the fullest.



Croke Canal overflowing at Two Ponds National Wildlife Refuge / USFWS

Two Ponds National Wildlife Refuge

Background

On Thursday, September 12, 2013, Two Ponds National Wildlife Refuge began to experience heavy rainfall. The Croke Canal bordering the Refuge became filled beyond capacity and overflowed onto the southern portion of 80th Avenue. The right lane was closed for several hours. The wetlands on the Refuge helped absorb the flood waters nearby and no damage occurred on Two Ponds.

The Refuge experienced additional rainfall Friday, September 13 through Sunday, September 15. Two Ponds continued to absorb floodwater bringing the ponds to ideal water levels while helping to reduce the overflow of its bordering canals. Trail conditions and infrastructure were monitored by Refuge staff, emergency safety procedures were followed with no report of damage or injuries.

Path Forward

No damage occurred on the Refuge and public visitation is continuing under normal operations.

Rocky Flats National Wildlife Refuge

Background

During the severe storm event of September 11-15, 2013, Rocky Flats National Wildlife Refuge experienced 5-10 inches of rain on the Refuge, with areas upstream to the west receiving over 10 inches of rain. This large amount of rainfall, mainly on the 12th and 13th, and runoff from outside the Refuge flowing onto the Refuge caused fast moving water and debris of over 2-3 feet in the drainages to impact roads and embankments. Water was flowing over these impediments causing the roads to have many washouts and removal of the gravel surface. The dike embankment of Lindsay Pond #1 in the Rock Creek Drainage was breached causing the loss of the outlet structure, all the water, and the native fish that had been restore to the drainage. Some of the areas of the Refuge are still not accessible, but hopefully will be soon so that all the damage can be estimated.

As of Monday, September 16, water was still moving across the grasslands and infrastructure and the following areas had received notable damage:

- Lindsay Pond #1 Dike breached
- All roads received various levels of

water damage, some impassable

- Several water flow monitoring stations received damage

Path Forward

A preliminary damage assessment was estimated at \$3M and will be refined in the coming weeks. Work is now underway to make the most immediate temporary repairs to roads and infrastructure. Once these repairs have been completed, the Refuge will resume normal operations. Over the next couple of months, permanent repairs will be made.



Flooding on Main Road at Woman Creek Drainage Crossing at Rocky Flats National Wildlife Refuge /

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